

What is claimed is:

1 SUB A7 1. A database system comprising:  
2 a persistent data storage device storing a first file management context and  
3 having a pool of storage elements; and  
4 a non-persistent memory storing a second file management context,  
5 the first file management context to indicate allocated permanent files in  
6 the pool of storage elements, and col 1-3  
7 the second file management context to indicate allocated temporary files  
8 and permanent files in the pool of storage elements. col 1-5

1 2. The database system of claim 1, wherein the first file management context  
2 is a subset of the second file management context.

1 3. The database system of claim 1, further comprising a control module  
2 adapted to update an entry in the second file management context without updating an  
3 entry in the first file management context to allocate a temporary file.

1 4. The database system of claim 3, wherein the control module is adapted to  
2 update an entry in both the first and second file management contexts to allocate a  
3 permanent file.

1 5. The database system of claim 1, wherein the pool of storage elements  
2 comprises a pool of storage blocks.

1 6. The database system of claim 5, further comprising a control module  
2 adapted to allocate one or more of the storage blocks to a temporary file or a permanent  
3 file.



13. The database system of claim 9, further comprising:  
one or more other access modules;  
one or more other persistent storage devices accessible by the  
corresponding one or more other access modules; and  
one or more other first and second file management contexts  
corresponding to the one or more other access modules.

14. The database management system of claim 9, wherein the access module performs at least one of a transaction locking and database logging operation when updating the first file management context, and the access module is adapted not to perform the transaction locking and database logging operations when updating the second file management context but not updating the first file management context.

15. The database management system of claim 1, wherein the permanent files contain user data and the temporary files contain results of queries.

16. A method for use in a database system having a persistent storage device and a non-persistent memory, comprising:

- storing a first file management context in the persistent storage device;
- storing a second file management context in the non-persistent memory;
- updating both the first and second file management contexts to allocate a permanent file; and
- updating the second file management context without updating the first file management context to allocate a temporary file.

17. The method of claim 16, further comprising maintaining the first file management context despite system reset, wherein the second file management context is lost due to the system reset.

18. The method of claim 16, wherein the first file management context contains a storage identifier map to allocate storage identifiers and an allocation unit map

3 to allocate blocks in the persistent storage device, and wherein updating the first file  
4 management context comprises updating the storage identifier map and the allocation unit  
5 map.

1 19. The method of claim 18, wherein the second file management context  
2 contains a storage identifier map to allocate storage identifiers and an allocation unit map  
3 to allocate blocks in the persistent storage device, and wherein updating the second file  
4 management context comprises updating the storage identifier map and the allocation unit  
5 map.

1 20. The method of claim 16, further comprising receiving a request, the  
2 request containing a flag to indicate allocation of a temporary file or a permanent file,  
3 wherein updating one or both of the first and second file management contexts is based  
4 on the flag.

1 21. The method of claim 16, further comprising copying the first file  
2 management context to the non-persistent memory upon system startup.

1 22. The method of claim 16, further comprising performing at least one of a  
2 transaction locking and database logging operation when updating the first file  
3 management context and not performing the transaction locking or database logging  
4 operation when updating the second file management context without updating the first  
5 file management context.

1 23. An article comprising at least one storage medium containing instructions  
2 that when executed cause a system to:  
3 store a first file management context to indicate allocation of temporary  
4 and permanent files; and  
5 store a second file management context to indicate allocation of permanent  
6 files.

24. The article of claim 23, wherein the instructions when executed cause the system to further:

receive a request containing a flag to indicate a permanent file or a temporary file;

update both the first and second file management contexts if the flag indicates a permanent file; and

update the second file management context without updating the first file management context if the flag indicates a temporary file.

25. The article of claim 24, wherein the instructions when executed cause the system to update the first file management context by updating a first storage identifier map and a first allocation unit map, and update the second file management context by updating a second storage identifier map and a second allocation unit map.

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